

WHAT IS CLAIMED IS:

1 1. A method for making an arch expander for a patient, comprising:
2 scanning the patient's dentition;
3 fabricating an appliance adapted to be positioned between posterior teeth and a
4 palatal arch, the appliance having first and second movable portions; and
5 providing an expander between the first and second portions of the appliance.

1 2. The method of claim 1, further comprising adjusting the expander to vary
2 the spacing between the first and second portions of the appliance.

1 3. The method of claim 1, wherein the expander comprises one or more
2 screws.

1 4. The method of claim 1, wherein the expander comprises one or more
2 springs.

1 5. The method of claim 1, wherein the first and second portions comprise
2 super-elastic nitinol.

1 6. The method of claim 1, wherein the appliance is fabricated using
2 stereolithography, fused deposition modeling, 3-D printing, or selective laser
3 sintering.

1 7. The method of claim 1, wherein the scanning comprises intra-oral
2 scanning.

1 8. The method of claim 1, wherein the scanning comprises:
2 taking an impression of the patient's teeth;

3 placing the impression in a scanner; and
4 generating a 3D model of the impression.

1 9. The method of claim 1, wherein the scanning captures the patients'
2 dentition and palatal arch.

1 10. The method of claim 1, further comprising adjusting the expander on a
2 periodic basis.

1 11. A dental appliance, comprising:
2 a shell including at least one layer of a polymeric material and having a cavity
3 which fits closely over one or more posterior teeth, the shell having first and second
4 moveable portions; and
5 an expander positioned between the first and second portions of the appliance.

1 12. The dental appliance of claim 11, wherein the expander is user-adjustable
2 to vary a spacing between the first and second portions of the appliance.

1 13. The dental appliance of claim 11, wherein the expander comprises one or
2 more screws.

1 14. The dental appliance of claim 11, wherein the expander comprises one or
2 more springs.

1 15. The dental appliance of claim 11, wherein the first and second portions
2 comprise super-elastic nitinol.

1 16. The dental appliance of claim 11, wherein the shell is fabricated using
2 stereo-lithography, fused deposition modeling, or selective laser sintering.

1 17. The dental appliance of claim 11, wherein the shell shape is determined by
2 intra-orally scanning a patient.

1 18. The dental appliance of claim 11, wherein the shell shape is determined
2 from digitally captured scans of a patient's dentition and palatal arch.

1 19. The dental appliance of claim 11, wherein the expander is adjusted on a
2 periodic basis.